

INTERNATIONAL SEARCH REPORT

Inter^l nal Application No
PCT/US 01/16949A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01M12/06 H01M4/42 H01M6/12 C22C18/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01M C22C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 168 018 A (YOSHIZAWA HIROSHI ET AL, KATANO, JP) 1 December 1992 (1992-12-01) cited in the application column 3, line 22 - line 63 ---	1-5, 12, 13
Y	US 5 306 580 A (MANSFIELD JR ROBERT N ET AL, VALLEY VIEW, US) 26 April 1994 (1994-04-26) cited in the application column 4, line 34 -column 6, line 15 --- -/--	1-5, 12, 13

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

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- *Z* document member of the same patent family

Date of the actual completion of the international search

7 September 2001

Date of mailing of the international search report

19/09/2001

Name and mailing address of the ISA

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PCT/US 01/16949

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE WPI Section Ch, Week 199147 Derwent Publications Ltd., London, GB; Class L03, AN 1991-343943 XP002177021 & JP 03 230476 A (MITSUI MINING & SMELTING CO), 14 October 1991 (1991-10-14) abstract ---	4-7
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 343 (E-555), 10 November 1987 (1987-11-10) & JP 62 123653 A (MITSUI MINING & SMELTING CO LTD;OTHERS: 01), 4 June 1987 (1987-06-04) abstract ---	4-7
A	DATABASE WPI Section Ch, Week 199952 Derwent Publications Ltd., London, GB; Class L03, AN 1999-606550 XP002177022 & JP 11 265715 A (DOWA MINING CO LTD), 28 September 1999 (1999-09-28) abstract -----	1,3

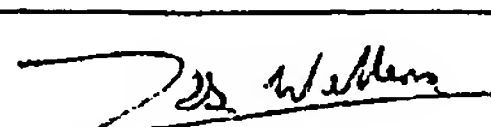
INTERNATIONAL SEARCH REPORT

Inter nal Application No
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5168018 A	01-12-1992	JP 2068417 C	10-07-1996
		JP 4026061 A	29-01-1992
		JP 7107857 B	15-11-1995
		JP 2808822 B	08-10-1998
		JP 4026062 A	29-01-1992
		JP 2068418 C	10-07-1996
		JP 4026064 A	29-01-1992
		JP 7107858 B	15-11-1995
		JP 1967640 C	18-09-1995
		JP 4026066 A	29-01-1992
		JP 6097611 B	30-11-1994
		JP 2754865 B	20-05-1998
		JP 4026067 A	29-01-1992
		AU 622588 B	09-04-1992
		AU 7701791 A	28-11-1991
		CA 2042549 A,C	18-11-1991
		DE 69111686 D	07-09-1995
		DE 69111686 T	21-03-1996
		EP 0457354 A	21-11-1991
US 5306580 A	26-04-1994	US 5279905 A	18-01-1994
		CA 2091239 A	10-09-1993
		DE 69311934 D	14-08-1997
		DE 69311934 T	11-12-1997
		DK 560579 T	23-02-1998
		EP 0560579 A	15-09-1993
		ES 2104053 T	01-10-1997
		HK 1000492 A	27-03-1998
		JP 3060145 B	10-07-2000
		JP 6013112 A	21-01-1994
		SG 46271 A	20-02-1998
JP 3230476 A	14-10-1991	NONE	
JP 62123653 A	04-06-1987	NONE	
JP 11265715 A	28-09-1999	NONE	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/01165

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. ⁷ : H01M 6/06, 6/12												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols) IPC ⁷ H01M AS INDICATED BELOW												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched -												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI: IPC H01M 6/04, 6/06, 6/12 with key words oxygen, air; H01M with key words zinc, oxygen, air, second, further												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X, Y	US 2001/0009735 A1 (Yang et al.), 26 July 2001 Page 1, paragraph 10- page 2; paragraph 14, page 2; paragraph 29, page 3, paragraphs 32, 33, 35; page 4 paragraphs 48, 50; claims 1, 5, 22, 26, 43	1- 52										
Y	WO 01/91224 A1 (Eveready Battery Company Inc.), 29 November 2001 Whole Document	1- 52										
Y	US 6248476 B1 (Sun et al.), 19 July 2001 Whole Document	1- 52										
<input type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
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Date of the actual completion of the international search 12 September 2003		Date of mailing of the international search report 17 SEP 2003										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  MR KIM WELLENS Telephone No : (02) 6283 2162										

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU03/01165

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member		
US	2001000973	JP 11316357	US	6190014	
WO	200191224	AU 200174955	EP	1287578	US 6602629
US	6248476	NONE			
					END OF ANNEX